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New species and records of the genus *Spiloscapha* Bates (Coleoptera: Tenebrionidae) from the Oriental and Papuan Regions[1]

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Abstract

New species and records of the genus *Spiloscapha* Bates (Coleoptera: Tenebrionidae: Diaperinae) from the Oriental and Papuan Regions are dealt with. New species: *Spiloscapha bremeri* **n. sp.** (Sulawesi), *Spiloscapha cooteri* **n. sp.** (China: Jiangxi), *Spiloscapha grimmi* **n. sp.** (Thailand), *Spiloscapha palawanica* **n. sp.** (Palawan), *Spiloscapha rotundipennis* **n. sp.** (Borneo), *Spiloscapha weigeli* **n. sp.** (New Guinea: Irian Jaya). New combination: *Basanus sulawesicus* (Schawaller, 1997) **n. comb.**
Keywords: Coleoptera, Tenebrionidae, *Spiloscapha*, new species, Oriental, Papuan, taxonomy.

Zusammenfassung

Neue Arten und Nachweise der Gattung *Spiloscapha* Bates (Coleoptera: Tenebrionidae: Diaperinae) aus der Orientalischen und Papuanischen Region werden mitgeteilt. Neue Arten: *Spiloscapha bremeri* **n. sp.** (Sulawesi), *Spiloscapha cooteri* **n. sp.** (China: Jiangxi), *Spiloscapha grimmi* **n. sp.** (Thailand), *Spiloscapha palawanica* **n. sp.** (Palawan), *Spiloscapha rotundipennis* **n. sp.** (Borneo), *Spiloscapha weigeli* **n. sp.** (New Guinea: Irian Jaya). Neue Kombination: *Basanus sulawesicus* (Schawaller, 1997) **n. comb.**

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[1] Contributions to Tenebrionidae, no. 46. – For no. 45 see Biodiversität und Naturausstattung im Himalaya, Erfurt (2003).

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1 Introduction

Only a few years ago the genus *Spiloscapha* Bates, 1873 [subfamily Diaperinae, type species *Spiloscapha crassicornis* Bates, 1873 = *thallioides* (Pascoe, 1869)] was treated by revising the 9 known species, by describing further 10 new species from the Oriental and Papuan regions, by discussing the genus and species characters, by presenting an identification key and by listing all references (SCHAWALLER 1997). Since that time, new material containing new records and new species has been discovered in different collections, which seems worth to be treated in an additional paper. One species described earlier (*sulawesicus* Schawaller, 1997) has been excluded and transferred to the genus *Basanus* Lacordaire, 1857. A further new species has been described recently from Taiwan (MASUMOTO & MERKL 2003), so the genus *Spiloscapha* now consists of 25 species.

The descriptions of new species herein given treat only the species characters as discussed in my previous paper and do not repeat the genus characters. The new material does not solve the problem of separating *Spiloscapha* Bates, 1873, from *Scaphidema* Redtenbacher, 1849; the latter might be paraphyletic (see also SCHAWALLER 2003).

Acronyms of depositories

CRGT	Collection Dr. ROLAND GRIMM, Tübingen
CTKM	Collection TATJANA KOMPANTZEVA, Moscow
HNHM	Hungarian Natural History Museum, Budapest (Dr. OTTÓ MERKL)
MHNG	Muséum d'Histoire Naturelle, Genève (Dr. IVAN LÖBL)
NHMB	Naturhistorisches Museum, Basel (Dr. MICHEL BRANCUCCI)
NME	Naturkundemuseum, Erfurt (MATTHIAS HARTMANN)
SMNS	Staatliches Museum für Naturkunde, Stuttgart

Acknowledgements

The loan of specimens of *Spiloscapha* from the above listed collections is greatly appreciated. OLAF JÄGER (Staatliches Museum für Tierkunde Dresden) kindly sent on loan comparative material of the genus *Basanus*. JOHANNES REIBNITZ (SMNS) prepared the photographs.

2 Species of *Spiloscapha* Bates, 1873

Spiloscapha baloghi Kaszab, 1970

New material: Papua New Guinea, Morobe Prov., Range between Aseki and Menyamya, 2000–2200 m, 12.IV.1998, leg. A. RIEDEL, 1 ex. SMNS.

Distribution: Eastern New Guinea (Papua).

Spiloscapha bipunctata Schawaller, 1997

New material: N Vietnam, SW Dong-Hoi, 26.XI.1961, leg. G. KABAKOV, 1 ex. CTKM. – China, S Yunnan, Mengyang NR, 12.IX.1994, leg. S. KURBATOV, 1 ex. CTKM.

Distribution: N Vietnam (type locality), Yunnan (new record).

Spiloscapha bremeri **n. sp.** (Figs. 3, 12)

Holotype (♂): Indonesia, S Sulawesi, 25 km E Mamasa (Kalama), 3°02′S 119°28′E, 1100 m, 1.–3.VII.2001, leg. L. BOLM, SMNS.

Etymology: Named after Prof. HANS JOACHIM BREMER (Melle/Germany), specialist of African and Asian Tenebrionidae, and partner of long-term cooperation.

Description: Shape and colour pattern of pronotum and elytra see Fig. 3. Head, pronotum and scutellum dark ferrugineous; elytron dark ferrugineous and in the middle with a slightly darker transverse band; ventral side of body ferrugineous, abdominal sternites somewhat darker. Head with somewhat denser and coarser punctation than on pronotum; antenna blackish with the 4 basal segments somewhat lighter and coloured like the head. Pronotum with fine punctures, distance of the punctures 4–8 times longer than the diameter; anterior margin in the middle and basal margin unbordered. Elytron with only 7 rows of punctures, lateral rows extinct, third row with about 40 punctures; intervals flat, with a few scattered punctures; lateral margin to be seen from dorsal nearly on its total length. Punctures on metasternum and abdominal sternites distinctly coarser laterally than medially. Aedeagus see Fig. 12. Body length 3.3 mm.

Diagnosis: *Spiloscapha bremeri* n. sp. can be recognised by the small body size (3.3 mm) of oval shape, by the colour pattern and by the shape of the aedeagus with long and narrow parameres. The only other species within the genus of similar body size (3.4 mm) and shape is *Spiloscapha sumatrana* Schawaller, 1997, having a specific colour pattern (♀ holotype) or being unicoloured ferrugineous (doubtful female material listed herein below). The pronotum of *Spiloscapha bremeri* n. sp. is of conical and that of *Spiloscapha sumatrana* of transverse shape, which is considered to be a specific difference and not just as an infraspecific sexual character.

Distribution: Known only from the type locality on Sulawesi.

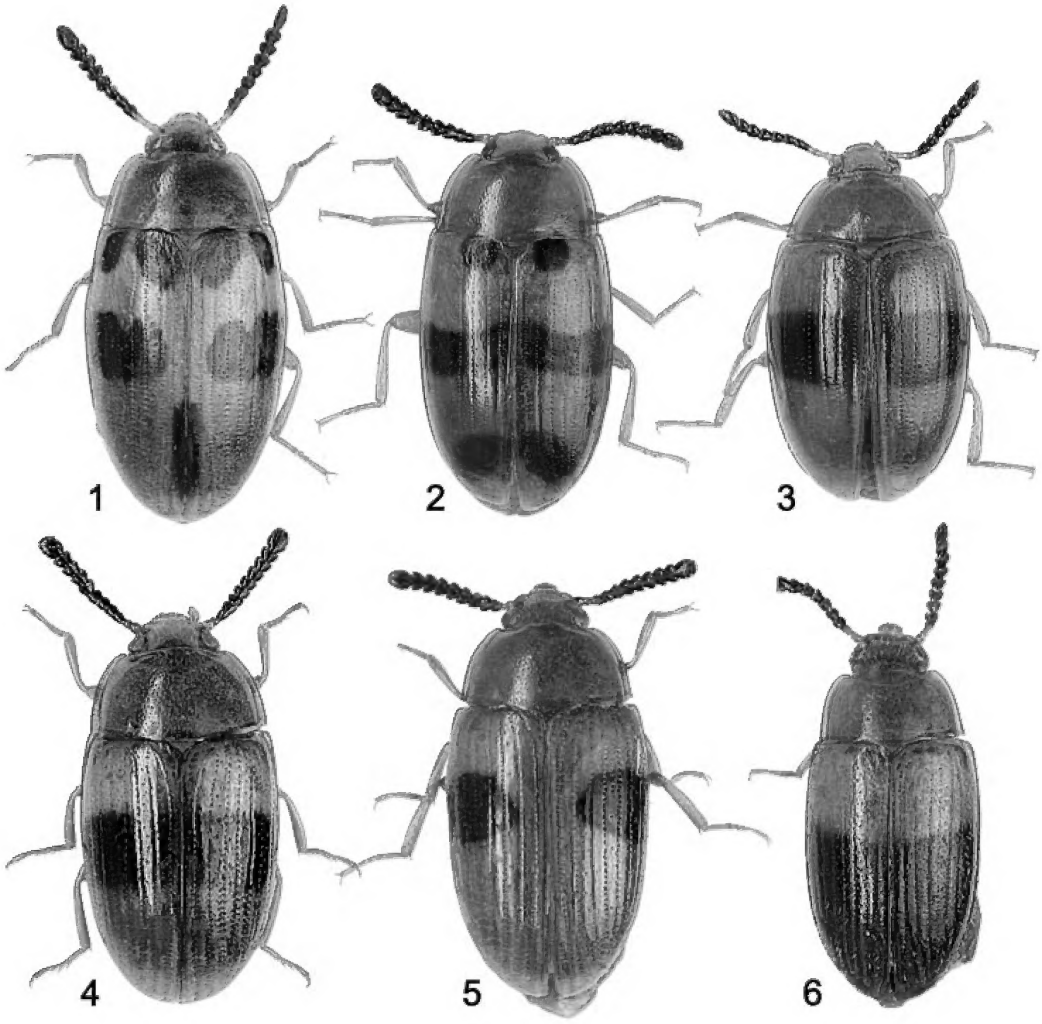
Spiloscapha cooteri **n. sp.** (Figs. 8, 13)

Holotype (♂): China, Jiangxi Prov., Haungganshan, Wuyi Shan NR, 27°83′N 117°76′E, 5.VI.2001, leg. J. COOTER, SMNS.

Etymology: Named after JON COOTER (Hereford/England), collector of the holotype, who generously deposited some of his Chinese tenebrionids in the Museum Stuttgart.

Description: Shape and colour pattern of pronotum and elytra see Fig. 8. Head, pronotum and scutellum ferrugineous; elytron ferrugineous with a black spot in the posterior part not reaching tip and lateral margin, but reaching the suture; ventral side of body ferrugineous, abdominal sternites somewhat darker. Head with somewhat denser and coarser punctation than on pronotum; antenna completely ferrugineous and coloured like the head. Pronotum with fine punctures, distance of the punctures 2–8 times longer than the diameter; anterior margin in the middle and basal margin unbordered. Elytron with only 8 rows of punctures, third row with about 30 punctures; intervals flat, with a few scattered punctures; lateral margin to be seen from dorsal nearly on its total length. Punctures on metasternum and abdominal sternites distinctly coarser laterally than medially. Aedeagus see Fig. 13. Body length 3.5 mm.

Diagnosis: This species is one of the few species within the genus with a round body shape and small body size of 3.5 mm (together with only *Spiloscapha cyclopsensis* Schawaller, 1997, from New Guinea, and *Spiloscapha rotundipennis* n. sp. from Borneo, body length 3.5 mm and 2.8–3 mm respectively). *Spiloscapha cooteri* n. sp. can be recognised by a distinctly different colour pattern of the elytra and of the antennae, besides the short and broad aedeagus (*rotundipennis* n. sp. is known only by females).



Figs. 1–6. Dorsal view of *Spiloscapha* species. – **1.** *S. nepalica*, Meghalaya. **2.** *S. nepalica*?, Tamil Nadu. **3.** *S. bremeri* n. sp., holotype. **4.** *S. nigrofasciata*, Tioman. **5.** *S. nigrofasciata*?, Pulau Langkawi. **6.** *S. palawanica* n. sp., holotype.

Distribution: Known only from the type locality in China.

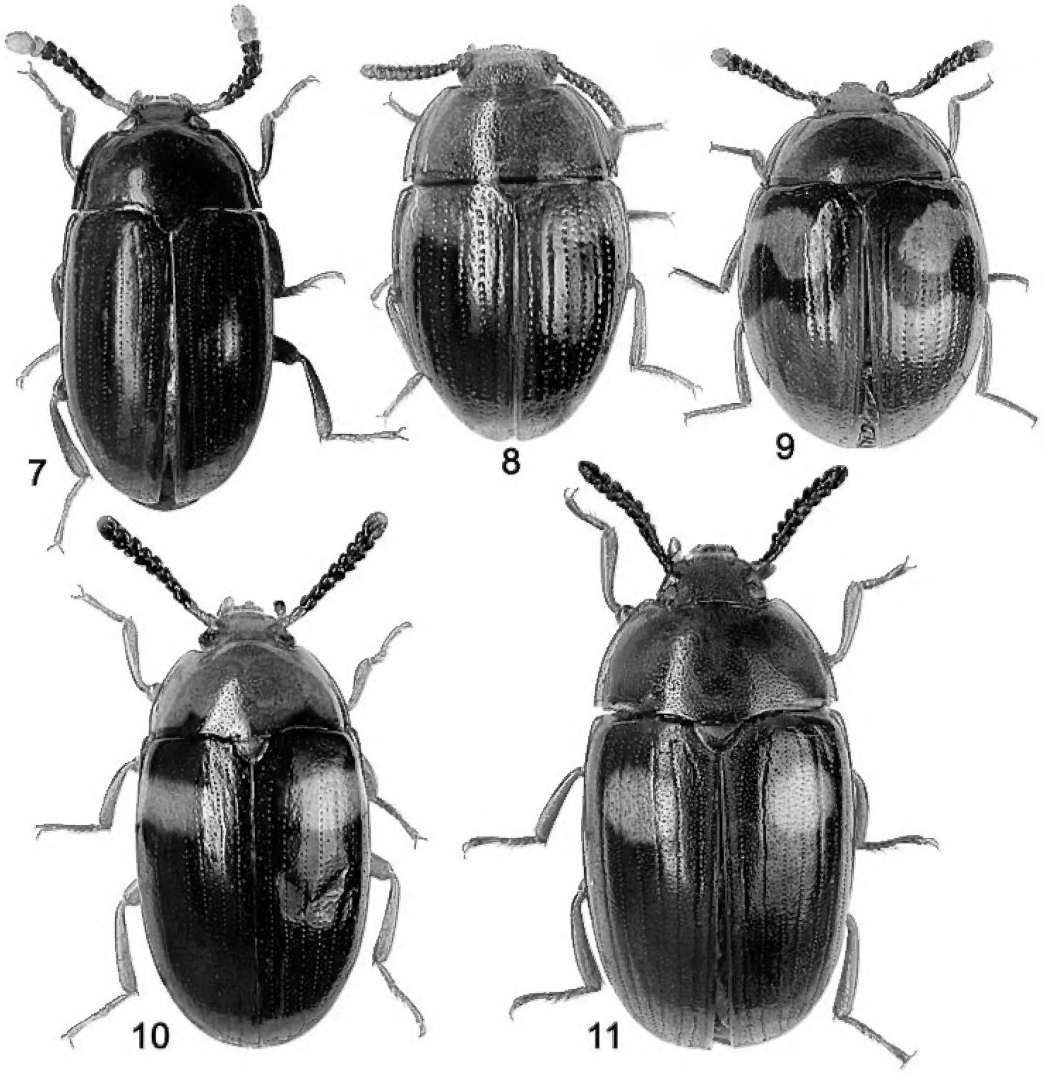
Spiloscapha grimmi n. sp. (Figs. 11, 14)

Holotype (♂): Thailand, NWW Chiang Mai, Doi Suthep, 1200 m, 24.IV.–13.V.2003, leg. R. Grimm, CRGT.

Paratypes: Same data as holotype, 7 ex. CRGT, 3 ex. SMNS, 1 ex. HNHM. – Thailand, Chiang Mai Prov., Doi Suthep, 19.–22.IV.1991, leg. S. Bílý, 1 ♀ NHMB.

Etymology: Named after Dr. Roland Grimm (Tübingen/Germany), collector of the holotype and partner of long-term cooperation.

Description: Shape and colour pattern of pronotum and elytra see Fig. 11. Head, pronotum and scutellum red ferrugineous; elytron darker ferrugineous and with a large, yellow spot in the anterior part; ventral side of body dark ferrugineous. Head with somewhat denser and coarser punctation than on pronotum; antenna



Figs. 7–11. Dorsal view of *Spiloscapha* species. – **7**. *S. weigeli* n. sp., holotype. **8**. *S. cooteri* n. sp., holotype. **9**. *S. rotundipennis* n. sp., holotype. **10**. *S. riedeli*, S Nabire. **11**. *S. grimmi* n. sp., holotype.

black with the 3 basal segments somewhat lighter and coloured like the head. Pronotum with distinct punctures, distance of the punctures 2–5 times longer than the diameter; anterior margin in the middle and basal margin unbordered. Elytron with 8 rows of punctures, third row with about 60 punctures; intervals flat, all with distinct and dense punctation; lateral margin to be seen nearly on its total length. Punctures on metasternum distinctly coarser laterally than medially, abdominal sternites equally punctured. Aedeagus see Fig. 14. Body length 4.8–5.2 mm.

Diagnosis: This species has a robust *Diaperis*-like body shape similar to *Spiloscapha assamica* Kaszab, 1975, from Assam and *Spiloscapha kobayashii* Shibata, 1978, from Taiwan and also densely punctured elytral intervals, but is somewhat smaller (about 5 mm in contrary to about 6 mm of *assamica* and *kobayashii*) and can

be separated not only by the shape and size of the aedeagus but immediately by the completely different dorsal colour pattern.

Distribution: Known only from the type locality in northern Thailand.

Spiloscapha javanicum Gebien, 1925

New material: W Sumatra, Gn. Singgalang S Bukittinggi, 1300 m, 14.–16.II.1991 leg. L. Bocák & M. Bocáková, 1 ex. SMNS.

Distribution: Java (type locality Pengalengan), Sumatra.

Spiloscapha nepalica Schawaller, 1997 (Figs. 1–2, 15)

New material: NE India, Meghalaya, Nokrek NP, 3 km S Daribokgiri, 25°27′N 90°19′E, 1400 m, 26.IV.1999, leg. L. Dembický & P. Pacholátko, 2 ex. NHMB.

Doubtful material: S India, Tamil Nadu, 15 km SE Kotagiri, Kunchappanai, 11°22′N 76°56′E, 17.–22.V.1997, leg. L. Dembický & P. Pacholátko, 1 ♂ SMNS.

Remarks: The colour pattern of the new material from Meghalaya (Fig. 1) fully coincides with the type material, the colour pattern of the single male from Tamil Nadu (Fig. 2) however is somewhat different, furthermore the aedeagus of this male (Fig. 15) has nearly triangular parameres, whereas the parameres of the type are distinctly sinuated laterally. The material at hand is too poor to decide, whether these differences are specific or infraspecific variations.

Distribution: E Nepal (type locality Num/Arun Valley), NE India (new record),? S India (doubtful male).

Spiloscapha nigrofasciata Gebien, 1925 (Figs. 4–5)

New material: Malaysia, Tioman, Kampong Tekek, 400 m, 9.III.1998, leg. L. Dembický & P. Pacholátko, 4 ex. NHMB, 2 ex. SMNS. – Malaysia, Benom Mts., 15 km E Kampong Dong, 700 m, 1.IV.1998, leg. L. Dembický & P. Pacholátko, 1 ex. NHMB. – Laos, Louangphrabang Prov., 5 km W Ban Song Cha, 1200 m, 1.–9.V.1999, leg. V. Kubáň 1 ♀ NHMB.

Doubtful identification: Malaysia, Kedah, Pulau Langkawi NW Datai rainforest, 2.–10.XI.2002, leg. E. Heiss, 2 ♀ CRGT. – N Thailand, NWW Chiang Mai, Doi Suthep, 1200 m, 24.IV.–13.V.2003, leg. R. Grimm, 1 ♀ CRGT.

Remarks: The dorsal colour pattern (position and interruption of the dark transverse band on the elytra) of the listed females among the doubtful material is somewhat different (compare Figs. 4–5). The aedeagi cannot be compared, thus this difference is considered at the moment not as specific.

Distribution: Singapore (type locality), Malaysia, Laos (new record),? Thailand (female with doubtful identification).

Spiloscapha palawanica **n. sp.** (Fig. 6)

Holotype (♀): Philippines, N Palawan, Bahile, 50 m, 22.XII.1992, leg. L. Bolm, SMNS.

Description: Shape and colour pattern of pronotum and elytra see Fig. 6. Head, pronotum and anterior part of elytra red ferrugineous, distal part of elytron black; ventral side of body ferrugineous, abdominal sternites somewhat darker. Head with somewhat denser and coarser punctation than on pronotum; antenna black with the 3 basal segments somewhat lighter and coloured like the head. Pronotum with fine punctures, distance of the punctures 2–5 times longer than the diameter; anterior margin in the middle and basal margin unbordered. Elytron with only 7 rows of punctures, external rows extinct, third row with about 45 punctures; intervals flat,

with bigger punctures mostly in the anterior part; lateral margin to be seen from dorsal nearly on its total length. Punctures on metasternum distinctly coarser laterally than medially, abdominal sternites only with very few fine punctures. Aedeagus unknown, only female available. Body length 3.7 mm.

Diagnosis: Body size, body shape and punctation are quite similar to *Spiloscapha eiliesa* Schawaller, 1997, described from the Philippines as well. But the colour pattern is distinctly different (*eiliesa* uniformly ferrugineous, *palawanica* n. sp. distinctly bicolourous). As discussed earlier (SCHAWALLER 1997), the dorsal colour pattern – with a certain variability – is considered to be species-specific within the genus. As long as bigger series are not available with a wider colour variation and also with intermediate forms, the two forms are considered different species. Unfortunately, the aedeagi cannot be compared, because *palawanica* n. sp. is hitherto represented only by a female.

Remarks: The last antennomere of the left antenna and all legs except the left mid leg of the holotype are missing.

Distribution: Known only from the type locality on Palawan.

Spiloscapha riedeli Schawaller, 1997 (Fig. 10)

New material: Indonesia, Irian Jaya, Manokwari Prov., Mokwam, 1300–1600 m, 17.IV.1993, leg. A. RIEDEL, 1 ex. SMNS. – Indonesia, Irian Jaya, 120 km S Nabire, Unipo-Ebore, 500 m, 4.I.1996, leg. A. WEIGEL, 2 ex. NME. – Indonesia, Irian Jaya, 170 km S Nabire, Epomani, 1150 m, 6.I.1996, leg. A. WEIGEL, 1 ex. SMNS.

Remarks: The new material confirms a certain variability of the dorsal colour pattern (Fig. 10): all specimens possess a unicoloured ferrugineous pronotum and a ferrugineous humeral spot on the elytra (type material with or without dark spot on the pronotum, elytra with or without humeral spot). The aedeagus of the new material coincides with the aedeagus of the type material.

Distribution: Western New Guinea (Irian Jaya = West Papua).

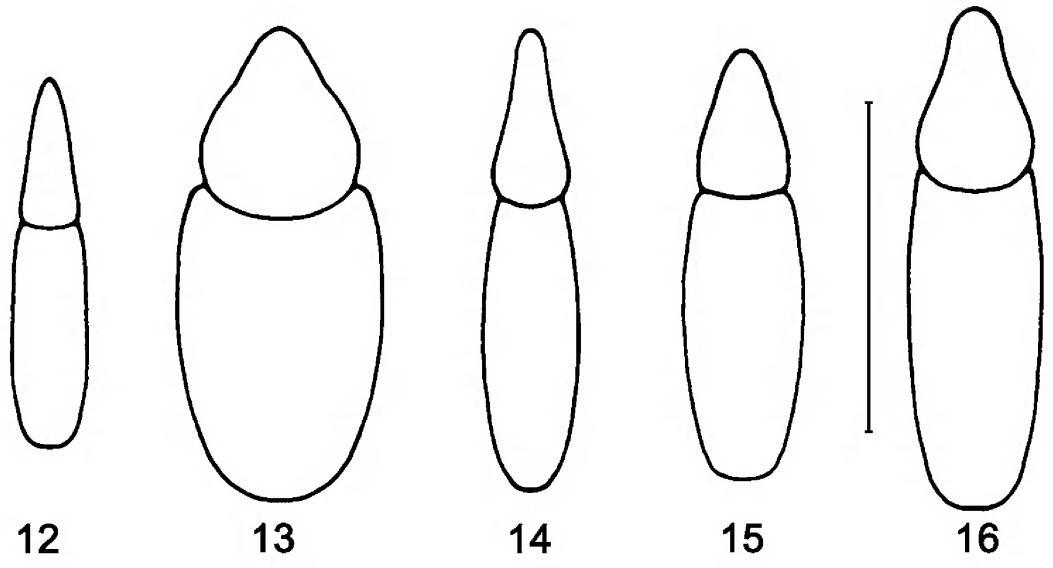
Spiloscapha rotundipennis **n. sp.** (Fig. 9)

Holotype (♀): Borneo, Sabah, Crocker Range, Gn. Emas, 1600 m, 6.–18.VI.1996, leg. J. KODADA, SMNS.

Paratype: Borneo, Sabah, Crocker Range, Rafflesia Centre, 13.–14.VI.1996, leg. J. KODADA, 1 ♀ SMNS.

Etymology: Named after the round shape of the elytra.

Description: Shape and colour pattern of pronotum and elytra see Fig. 9. Head, pronotum and scutellum ferrugineous; elytron ferrugineous, basal part except suture black and within this black part with a light yellow spot; ventral side of body dark, abdominal sternites somewhat darker. Head with somewhat denser and coarser punctation than on pronotum; antenna ferrugineous with the 3 basal and the terminal segments somewhat lighter and coloured like the head. Pronotum with extremely fine punctures, distance of the punctures 2–10 times longer than the diameter; anterior margin in the middle, and basal margin unbordered. Elytron with only 7 rows of punctures, external rows extinct, third row with about 30 punctures; intervals flat, with a few scattered punctures only in the anterior part; lateral margin to be seen from dorsal nearly on its total length. Punctures on metasternum and abdominal sternites distinctly coarser laterally than medially. Aedeagus unknown, only females available. Body length 2.8–3 mm.



Figs. 12–16. Aedeagus of *Spiloscapha* species. – **12.** *S. bremeri* n. sp., holotype. **13.** *S. cooteri* n. sp., holotype. **14.** *S. grimmi* n. sp., holotype. **15.** *S. nepalica*, Tamil Nadu. **16.** *S. weigeli* n. sp. – Scale line: 0.5 mm.

Diagnosis: This species is characterised within the genus by its round body shape and small body size around 3.0 mm, as well as by the dorsal colour pattern. Thus it seems reasonable to describe this taxon although no males are available. *Spiloscapha cooteri* n. sp. from China and *Spiloscapha cyclopsensis* Schawaller, 1997, from New Guinea are the only species with similar round shape and small size (both with a body length of 3.5 mm), but *Spiloscapha rotundipennis* n. sp. can easily be distinguished by a different colour pattern (*cooteri* n. sp.: ferrugineous elytra with a joint black spot, unicoloured ferrugineous antennae; *cyclopensis*: unicoloured black elytra with a bronze shine, distinctly bicoloured antenna).

Distribution: Known only from the type localities on Borneo.

Spiloscapha sumatrana Schawaller, 1997

Doubtful material: Borneo, Sarawak, Kuching Distr., Mt. Serapi, 27.–29.III.1994, leg. J. Horák, 1 ♀ SMNS. – Borneo, Sabah, Mt. Kinabalu NP, Headquarters, Liwagu River, 1495 m, 23.V.1987, leg. A. Smetana, 1 ♀ MHNG. – W Sumatra, Batang, Palupuh NR, 850 m, 15.II.1991, leg. L. Bocák & M. Bocáková, 1 ♀ SMNS.

Remarks: The above listed three females are unicoloured ferrugineous and have not the distinct colour pattern of the single female holotype, but all other characters coincide. The small body size and the oval body shape are quite characteristic within the genus, thus I hope not to fail in assigning the new material to that species. Unfortunately, only females of that species are as yet known, thus the aedeagi cannot be compared.

Distribution: Sumatra (type locality Medan), Borneo (new record).

Spiloscapha unicolor Blair, 1937

Doubtful material: Thailand, Umphang River, 16°07′N 99°00′E, 1000 m, 28.IV.–6.V.1991, leg. V. Kubáň, 1 ♀ NHMB.

Remarks: This female has absolutely flat elytral intervals, whereas the few previously known specimens including the examined syntype have slightly convex elytral intervals.

Distribution: Darjeeling, Bengal (type locality Kalimpong), Thailand.

Spiloscapha weigeli n. sp. (Figs. 7, 16)

Holotype (♂): Indonesia, Irian Jaya, 120 km S Nabire, Unipo-Ebore, 500 m, 4.I.1996, leg. A. WEIGEL, NME.

Etymology: Named after ANDREAS WEIGEL (Wernburg/Germany), collector of the holotype.

Description: Shape and colour pattern of pronotum and elytra see Fig. 7. Head, pronotum, scutellum and elytron black with a violet shine; ventral side of body also dark metallic. Head with somewhat denser and coarser punctation than on pronotum; antenna distinctly bicolourous with the 3 basal and 2 distal segments light yellow and the middle segments 4–9 black. Pronotum with few and very fine punctures, disc nearly polished, distance of the punctures over 10 times longer than the diameter; anterior margin in the middle and basal margin unbordered. Elytron with 8 rows of punctures, third row with about 40 punctures; intervals flat, with a few scattered punctures; lateral margin to be seen from dorsal nearly on its total length. Punctures on metasternum somewhat coarser laterally than medially, abdominal sternites only with very few fine punctures. Aedeagus see Fig. 16. Body length 4.0 mm.

Diagnosis: *Spiloscapha weigeli* n. sp. shares with *Spiloscapha violacea* Schawaller, 1997, also from Irian Jaya, the small body size (4–4.2 mm) and the metallic dorsal surface as well as the distinctly bicolourous antennae. Both species can be separated by a different body shape (longer and parallel in *weigeli* n. sp., rounder in *violacea*), by differently coloured antennae (3 basal and 2 terminal light segments in *weigeli* n. sp., 5 basal and 3 terminal light segments in *violacea*), and by a different shape of the aedeagus. *Spiloscapha ruficollis* Schawaller, 1997, also from Irian Jaya, has the same long and parallel body shape as *weigeli* n. sp. and also metallic elytra, but a ferrugineous pronotum, no bicolourous antennae and a different aedeagus.

Distribution: Known only from the type locality on western New Guinea (Irian Jaya = West Papua).

3 Transfer to *Basanus* Lacordaire, 1857

Basanus sulawesicus (Schawaller, 1997) **n. comb.**

Remarks: GEBIEN (1925) in his key of the Oriental genera of the Diaperini recognised a deep excavation externally at the tip of the elytra besides other characters as an important diagnostic character of the genus *Basanus* Lacordaire, 1857. In a much lesser extent, this excavation is also present in some species of *Spiloscapha* Bates, 1873. A detailed investigation of other genera of Diaperini might show that this character is of less important value for the generic separation. The type specimens of *Spiloscapha sulawesica* Schawaller, 1997, possess a deep elytral excavation. Thus the species is transferred at the present state of knowledge to the genus *Basanus*.

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